

One-Day Intensive, Hand -on Workshop on Fundamentals of High Performance Liquid Chromatography (HPLC)

Organized by VC Analytix at Venture Center

Gains	High performance Liquid Chromatography (HPLC): Operational principles and essential concepts. Theory of separation mechanisms and modes. Understanding the instrumentation including possible configurations, solvent delivery pumps, sample injectors, columns and detectors of HPLC. Basic maintenance of HPLC. Troubleshooting process for problems like pressure, baseline, peak shape and retention issues. Practical applications of HPLC in the Industry. HPLC Method Development Strategies. Best practices in HPLC. Live demonstration of experiments; Simple group practical/hands-on session; Mini-workshop on data interpretation with real data; Quick update on latest techniques/developments; Workshop is intended to be basic but shall include a few special applications illustrated with real case studies. Learn from faculty with extensive practical experience with industrial applications.														
Co-coordinator	Edna Joseph Phone: +91-7410045651 edna@venturecenter.co.in														
Organized by	<ul style="list-style-type: none"> Venture Center – a Technology Business Incubator 														
For whom	<ul style="list-style-type: none"> Industry professionals wishing to expand their skill sets (Industries – Pharma; Environmental; Forensic; Food, Petrochemicals etc) Students and staff of polymer/ materials sciences/ engineering/ analytical/physical chemistry wishing to equip themselves for industry jobs 														
When	(Friday) 24 June 2022 Time: 9 am – 5:30 pm														
Where	Training Room & Lab Block, Venture Center, 100 NCL Innovation Park, (Pashan) Road, Pune-411008														
Contact	Technical queries: Ms. Edna Joseph +91-7410045651 edna@venturecenter.co.in Registration queries: Ms. Lipika Biswas Email: eventsdesk@venturecenter.co.in														
Registration	<p>Maximum 20 seats; First-come-first-serve.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Fee category</th> <th style="text-align: left;">Fees</th> </tr> </thead> <tbody> <tr> <td>Current students with valid ID cards</td> <td>Rs 1,000/-</td> </tr> <tr> <td>Micro, small and medium enterprises</td> <td>Rs 2,500/-</td> </tr> <tr> <td>Academic institutions</td> <td>Rs 2,500/-</td> </tr> <tr> <td>Individuals</td> <td>Rs 2,500/-</td> </tr> <tr> <td>Large Companies</td> <td>Rs 4,500/-</td> </tr> <tr> <td>Anyone who do not fit into any of the above mentioned categories</td> <td>Rs 4,500/-</td> </tr> </tbody> </table> <p>Steps for registration:</p> <ul style="list-style-type: none"> Step 1: Interested participants need to fill in registration form at the following link. Register online at: https://tinyurl.com/HPLC-workshop Step 2: Payment details will be shared via email to participants post screening of registration details and seat will be confirmed only after receipt of payment. <p>Note:</p> <ul style="list-style-type: none"> REGISTRATIONS AND FINAL PAYMENT DEADLINE Registration closes once 20 seats are full or on 22 June 2022 (whichever comes sooner) Fees paid is not refundable and non transferable under any circumstances For more details, visit: https://www.venturecenter.co.in/analytical/home/technical-workshops-training-programs/ 	Fee category	Fees	Current students with valid ID cards	Rs 1,000/-	Micro, small and medium enterprises	Rs 2,500/-	Academic institutions	Rs 2,500/-	Individuals	Rs 2,500/-	Large Companies	Rs 4,500/-	Anyone who do not fit into any of the above mentioned categories	Rs 4,500/-
Fee category	Fees														
Current students with valid ID cards	Rs 1,000/-														
Micro, small and medium enterprises	Rs 2,500/-														
Academic institutions	Rs 2,500/-														
Individuals	Rs 2,500/-														
Large Companies	Rs 4,500/-														
Anyone who do not fit into any of the above mentioned categories	Rs 4,500/-														

Introduction

HPLC is one of the most widely used analytical techniques and acquires a high degree of versatility not found in other chromatographic systems. It has the ability to separate and identify components of a wide variety of chemical mixtures. HPLC is an important analytical tool used for chemistry and biochemistry research analyzing complex mixtures, purifying chemical compounds, developing processes for synthesizing chemical compounds, isolating natural products, or predicting physical properties. This technique finds applicability in a wide range of industries including pharma, environmental, forensic, food, petrochemical etc. It is also used in quality control to ensure the purity of raw materials, to control and improve process yields, to quantify assays of final products, or to evaluate product stability and monitor degradation.

This workshop aims to give an introduction to the Fundamentals of High Performance Liquid Chromatography for industry professionals and students. The workshop will be conducted by faculty having vast experience working on high end chromatography techniques. The workshop includes lab demonstrations and data interpretation exercises. The workshop shall also discuss some recent trends and new developments in research and industry relating to chromatography techniques. Learn from faculty with extensive practical experience with industrial applications.






Course outline:

- High Performance Liquid Chromatography (HPLC): Operational principles and essential concepts.
- Theory of separation mechanisms and modes.
- Understanding the instrumentation including possible configurations, solvent delivery pumps, sample injectors, columns and detectors of HPLC.
- Basic maintenance of HPLC.
- Troubleshooting process for problems like pressure, baseline, peak shape and retention issues.
- Practical applications of HPLC in the Industry. Workshop shall include a few special applications illustrated with real case studies. (Example application areas: Biomass, Pharma, Clinical, Plastics, Agro, Biopharma, Membranes etc)
- HPLC method development strategies.
- Best practices in HPLC.
- Live demonstration of experiments. Simple group practical/hands-on session
- Mini-workshop on data interpretation with real data.
- Quick update on latest techniques/developments.

Participants to note the following

- Course includes tea and lunch at Venture Center
- Course will include: Lab demo ; Access to restricted website with online compilation of resources for HPLC; Course notes including slides, case studies and application notes and One-on-one feedback on data interpretation exercise
- Please note, the participants will have to arrange for their own travel/local transport and accommodation and dinners
- No sessions will be repeated if a participant is unable to attend due to any reasons.
- Free membership in mailing list to follow-up on workshop and intimation of relevant events/ funding/ opportunities from Venture Center.
- Online Certificate of Participation issued by Venture Center

Workshop Schedule			
Time	Session title	Lead	Venue
9:00 to 9:30	Registration		Foyer area
9:30 to 9:45	Introduction to the course and faculty	V Premnath	TR, 100 NIP
9:45 to 10:30	<ul style="list-style-type: none"> • Introduction and basic principles of HPLC; • General terms and essential concepts; • Sample preparation and mobile phase selection techniques; • Quick overview of HPLC; • Typical data recorded 	Deepti	TR, 100 NIP
10:30 to 11:00	Tea		Foyer area
11:00 to 11:30	<ul style="list-style-type: none"> • Instrumentation; • Types of pumps, • Types of columns and column chemistry; • Sample Injectors; • Types of detectors 	Vaishali	TR, 100 NIP
11:30 to 12:00	Basic Maintenance of HPLC; Trouble shooting processes	Vaishali	TR, 100 NIP
12:00 to 13:00	<ul style="list-style-type: none"> • Practical applications of HPLC; • Method development strategies. • Best practices in HPLC. • Few special applications illustrated with real case studies. 	Ijaz	TR, 100 NIP
13:00 to 13:45	Lunch		Cafeteria, VC
13:45 to 14:15	Introduction to practical session (Venue: Training Room) Instructions, Learning points, Making groups, Assigning tasks	Edna	TR, 100 NIP
14:15 to 16:30	Practical Session (Venue: Lab Block) <ul style="list-style-type: none"> • Instrument parts • Mobile phase and sample preparation • Standard samples analysis • Data interpretation exercise • Calculations • Discussions to close workshop 	Deepti Sayali Shubhangi	Analytical & Instrumentation Lab, Lab Block, VC
16:30 to 17:00	Tea		Foyer area
17:00 to 17:30	Closure – Feedback, Certificate distribution	Edna	TR, 100 NIP

Speaker (in alphabetical order of last name)	
	<p>Dr. Vaishali Bane Senior Specialist-Mass Spectrometry</p> <p>Vaishali holds a Ph.D in Analytical Chemistry from Cork Institute of Technology, Ireland. She has 5 years of professional experience which includes providing analytical support to organic synthesis portfolio projects in the area of separation, purification, identification and quantification. She worked as Research Scientist in Avieum Life Sciences Pvt. Ltd. for about 3 years and then moved on to Syngene International Ltd., Bangalore, where she worked as a Senior Research Investigator in the drug discovery department for 2 years.</p>
	<p>Ms. Shubhangi Dherange Associate-Analytical Services</p> <p>Shubhangi holds a Masters Degree in Analytical Chemistry from the Department of Chemistry, Savitribai Phule Pune University. Her responsibilities at Venture Center includes support incubatees and budding entrepreneurs by offering lab services; Contributing and ensuring smooth operations of lab block at VC.</p>
	<p>Mr. Ijaz Inamdar Scientist-CAMS</p> <p>Ijaz has a Masters in Analytical Chemistry from the Department of Chemistry, University of Pune and about six years of experience in analytical research and development. He has been previously associated it with MAARC Labs, CSIR-NCL, Mylan Laboratories (R&D) and Cipla Pharmaceuticals (R&D). His areas of interests are HPLC, GC and Mass spectrometry.</p>
	<p>Ms. Edna Joseph Manager- Analytical Services</p> <p>Edna leads the Analytical Services Facility “VC AnalytiX” at Venture Center. She has a Masters in Organic Chemistry (Pune University) and holds PG Diploma in Patent Law. She has demonstrated knowledge and understanding of many analytical instruments (e.g. elemental analysis, thermal analysis, chromatography etc.) She has run and assisted in proof-of-concept projects. Many technical and scientific workshops, especially those with hands-on lab exercises with lab instruments have been conceptualized, planned and organized by her.</p>
	<p>Dr. Deepti Khanvilkar Senior Specialist-Analytical Services</p> <p>Deepti is a Senior Specialist at VC AnalytiX in Venture Center. She has more than 10 years of research and academic experience in analytical chemistry. Acquired PhD in Anal. Chem. from Ghent Univ. Belgium, and M.S. in Pharm. Anal. from NIPER, Mohali. Her specialization lies in separation, quantification and imaging of target molecules in biological and synthetic matrices using elemental analysis, chromatographic and spectroscopic techniques. She has been engaged in teaching theoretical and practical aspects of analytical chemistry for past several years in various esteemed institutions including IISER, Bharati Vidyapeeth. She has several international publications, presentations and collaborative research stays to her credit.</p>



Ms. Sayali Kulkarni
Senior Associate-Analytical Services

Sayali has a Masters in Analytical Chemistry from the Department of Chemistry, Shivaji University, Kolhapur, and 3 years experience as a quality control analyst in natural products. She was a project assistant in the Central NMR Facility at the National Chemical Laboratory, Pune. Her responsibilities include supporting incubatees and budding entrepreneurs by offering lab services, contributing and ensuring smooth operations of lab block at VC, participates in installation of instruments & operating lab in coordination with scientific mentors and advisors.



Premnath V
Director, Venture Center | Head, NCL Innovations

Dr. Premnath V is Scientist-Polymer Science & Engineering Division at NCL and Director-Venture Center. He is a technologist and commercialization expert having previously successfully commercialized two technologies. He has a keen interest in technology development for biomedical products. He holds a B.Tech. from the IIT Bombay and a Ph.D. from the MIT, USA. He has also been a Chevening Technology Enterprise Fellow with the Centre for Scientific Enterprises, London Business School and Cambridge University, UK. He brings with him considerable experience in technology development and commercialization (two successfully commercialized families of products), working with start-up companies (in Cambridge-UK and India) and engaging with large corporations on research and consulting projects as project leader.

Organized by



Entrepreneurship Development Center (Venture Center) – a CSIR initiative – is a Section 25 company hosted by the National Chemical Laboratory, Pune. Venture Center strives to nucleate and nurture technology and knowledge-based enterprises by leveraging the scientific and engineering competencies of the institutions in the Pune region in India. The Venture Center is a technology business incubator supported by the Department of Science & Technology's National Science & Technology Entrepreneurship Development Board (DST-NSTEDB). Venture Center's focuses on technology enterprises offering products and services exploiting scientific expertise in the areas of materials, chemicals and biological sciences & engineering.
For more information, visit: <http://www.venturecenter.co.in/>